**OBJECTIVES:** Compare pregnancy rates post-initiation of 84/7 (84 days levonorgestrel/ethinyl estradiol (EE) 0.15mg/0.03mg tablets plus EE 0.01mg or placebo for 7 days or 84 days levonorgestrel/ethinyl estradiol [EE] 0.1mg/0.02mg tablets plus EE 0.01mg for 7 days) to use of 21/7 (21 days combined EE/progestin plus 7 days placebo) or 24/4 (24 days EE/progestin plus 4 days placebo) oral contraceptive regimens over the course of 1 year. **METHODS:** Data for this study were obtained from the US i3 InvisionTM database from May 2009 through December 2011. Patients were included if they received the medication of interest (first use=index date), were age 15-40 on index date, and had continuous insurance coverage from index date through 1 year post index date. The 84/7 EE cohort was matched 2:1 without replacement to the 84/7 placebo cohort based upon age, sex, region, business type of insurance, insurance product and year of index date. Differences in pregnancy rates in the 1 year post index date were compared using a chi-square statistic. **RESULTS:** There were 12,923 individuals in the 84/7 EE cohort and 1,276 individuals in the 84/7 placebo cohort. Matching resulted in a final sample of 3,732 (2,488 in the 84/7 EE cohort and 1,244 in the 84/7 placebo cohort) for a successful match rate of 97.5%. Patients in the matched cohort had a mean age of 26.98 years (SD=7.56), resided predominantly in the South (55.55%) or Midwest (21.14%) and were most commonly insured with point of service insurance (80.47%) or an exclusive provider organization (12.94%). Pregnancy rates in the 1 year post-initiation on an OC were found to be statistically significantly lower for initiators of 84/7 EE compared with 84/7 placebo (3.01% v 4.50%; P=0.0200). **CONCLUSIONS:** Pregnancy rates were significantly lower in women using a 84/7 EE OC regimen compared with a 84/7 placebo regimen.

PIH44

## CONTRACEPTIVE UTILIZATION IN WOMEN WHO HAD AN ABORTION: A CANADIAN COHORT-STUDY

Goyette A

*Merck Canada Inc., Kirkland, QC, Canada*

**OBJECTIVES:** Unintended pregnancies constitute a global problem associated with substantial health care costs. In Canada, approximately 22% of all pregnancies will lead to an abortion, with a higher rate (52%) in women under 20. As leading causes of unintended pregnancies are closely related to the contraceptive method chosen, the objective of this study was to analyze utilization of contraceptives in women who had an abortion. **METHODS:** A retrospective cohort study was conducted using a random sample from the Régie de l'assurance-maladie du Québec (RAMQ) prescriptions and medical services databases. Inclusion criteria were: women who had an abortion at less than 14 weeks between January 1, 2008 and December 31, 2009 and who were continuously enrolled 12 months pre- and post-abortion. Claims for contraceptives were analyzed in the year preceding and following the abortion. **RESULTS:** Of the 7397 women included for analysis, 67.8% were between 15 and 29 years old. Approximately 30.2% filled at least one prescription for a contraceptive in the year preceding the abortion; 82.9% of claims were oral contraceptives. In the year after abortion, the usage of contraceptives increased to 54.3%. Utilization of a long-acting reversible contraception (LARC) increased after abortion. Levonorgestrel intrauterine system (IUS) was inserted on the day of the abortion in 7.5% of women. Within one month of abortion, 47% of women claimed for oral contraceptives, 27% for Levonorgestrel IUS, 12% for transdermal patches, 8% for vaginal rings and 6% for depo-medroxyprogesterone acetate. **CONCLUSIONS:** The data showed that the utilization of contraception increased after an abortion. A valuable benefit of LARCs is that their effectiveness does not rely on continuous user compliance, which could help explain the increased utilization of these methods after an abortion. However, the utilization of LARCs remains low which may indicate an unmet need for a greater variety of LARC options.

PIH45

## COMPARISON OF UNINTENDED PREGNANCY RATES IN USERS OF 84/7, 21/7, AND 24/4 ORAL CONTRACEPTIVE REGIMENS

Brewster C[1], Lage MJ[2], Grubb E[1]

[1]*Teva Pharmaceuticals, Kansas City, MO, USA,* [2]*HealthMetrics Outcomes Research, Delray Beach, FL, USA*

**OBJECTIVES:** Compare pregnancy rates post-initiation of 84/7 (84 days levonorgestrel/ethinyl estradiol (EE) 0.15mg/0.03mg tablets plus EE 0.01mg or placebo for 7 days or 84 days levonorgestrel/ethinyl estradiol [EE] 0.1mg/0.02mg tablets plus EE 0.01mg for 7 days) to use of 21/7 (21 days combined EE/progestin plus 7 days placebo) or 24/4 (24 days EE/progestin plus 4 days placebo) oral contraceptive regimens over the course of 1 year. **METHODS:** Data for this study were obtained from the US i3 InVisionTM database from January 1, 2006 through December 31, 2011. Patients were included if they received the medication of interest (with first such receipt identified as index date), were age 15-40 on index date, and had continuous insurance coverage from index date through 1 year post index date. Two distinct analyses were performed: 1 comparing pregnancy rates post-initiation on a 84/7 or 21/7 OC and the other comparing pregnancy post-initiation on a 84/7 or 24/4 OC. The 84/7 cohort was matched to each of the alternative cohorts of interest based upon age, sex, region, business type of insurance, insurance product and year of index date. **RESULTS:** There were 29,532 individuals in the 84/7 cohort, 662,721 individuals in the 21/7 cohort, and 169,871 individuals in the 24/4 cohort. Matching of the 84/7 cohort to each of the alternative cohorts resulted in a successful match rate of over 99% when comparing 84/7 with 21/7 and 96.7% when comparing 84/7 with 24/4. Pregnancy rates in the 1 year post-initiation on an OC were statistically significantly lower for initiators of 84/7 compared with 21/7 (7.52% v 4.43%; P<0.0001) as well as when comparing 84/7 with 24/4 (6.95% v 4.43%; P<0.0001). **CONCLUSIONS:** In this study, pregnancy rates were significantly lower in women using a 84/7 OC regimen compared with 21/7 or 24/4 regimens.

PIH46

## OUTCOMES OF DRUG USE DURING PREGNANCY: A NOVEL DATABASE IN THE NETHERLANDS TO STUDY DRUGS RISK ON THE YET UNBORN

Houweling LMA[1], Hukkelhoven CWPM[2], Schiere AM[2], van Wijngaarden RPT[1], Herings RMC[1]

[1]*PHARMO Institute for Drug Outcomes Research, Utrecht, The Netherlands,* [2]*The Netherlands Perinatal Registry, Utrecht, The Netherlands*

**OBJECTIVES:** Insight into comorbidities and detailed drug exposure before and during pregnancies as well as outcomes in children is pivotal to perform pharmacoepidemiological pregnancy outcome studies. A database was constructed that captures both detailed drug exposure before and during pregnancy as well as pregnancy related information and outcomes of the neonate (and other relevant clinical information) by linking the Netherlands Perinatal Registry (PRN) with the PHARMO Record Linkage System (RLS). **METHODS:** The PRN is an anonymous nationwide registry, including data from the midwifery, the obstetrics and the neonatology/pediatrics registry. The PHARMO RLS includes data from multiple health care databases such as drug dispensings, hospitalizations, GP data and clinical laboratory measurements and covers approximately 20% of the Dutch population. Both databases were linked using different record linkage techniques. Key variables (e.g. maternal age, gestational duration, parity, singleton birth) were assessed to determine comparability between the PRN and the linked PRN-PHARMO RLS pregnancies. **RESULTS:** The linkage of 1,453,504 pregnancies registered between 2000 and 2007 in the PRN with PHARMO RLS resulted in a cohort of 151,250 women with complete drug and clinical data available for 203,972 pregnancies. Linked pregnancies were comparable with all pregnancies. In 67% of all pregnancies at least one prescription drug was used. The most frequently used drugs included anti-anemic preparations (26%), antibacterials (20%) and gynecologic anti-infectives (14%). As dispensing date, duration of use and dose are recorded in the PHARMO RLS, exposure per trimester can be assessed and related to birth outcomes, such as prematurity and congenital defects as recorded in the PRN. **CONCLUSIONS:** Linkage of the Netherlands Perinatal Registry and the PHARMO RLS creates the possibility to study detailed drug utilization and comorbidities of mothers before, during and after pregnancy and of children. This enables to study potential adverse effects that might impact pregnancies or child development later in life.

PIH47

## ANALYSIS OF THE FORMULARY PROVISION OF CHILDREN IN UKRAINE

Kacheray Y[1], Zalis'ka O[1], Chavus H[2]

[1]*Danylo Halytsky Lviv National Medical University, Lviv, Ukraine,* [2]*Pharmacy , Lviv, Ukraine*

**OBJECTIVES:** Formulary system of medical provision is created in Ukraine.. The Order of MOH of Ukraine No 529 "About Creation of Formulary System for Health Institutions" was approved in 2009. The Fourth edition of State Formulary approved in 2012. **METHODS:** We used comparative analysis of drug information for children from all editions of the State Formylary (2009-2012) were conducted.The State Formylary contains a special section for children "Neonatology medicines." All medicines in this section are classified into 11 pharmacological groups. **RESULTS:** In 2009 were included 95 medicines for children, 2010 – 91, 2011 – 81, 2012 - 78 respectively. For the first time in 2011 the State Formylary were included three preparations for replacement surfactant therapy for newborns with respiratory disorders. It's Ukrainian-made preparation "Neosurf" emulsion, and two imported medicines "Infasurf" suspension, and "Curosurf" suspension. We evaluated the costs of treatment were 223.2 € (1€ = 9.98 UAH), 404.5 €, 630.6 € respectively. Since 2007 for the state budget were purchased Curosurf, from 2008 - Neosurf, and 2011 - Infasurf. We found regional differences concerning the financing of these medicines. Curosurf funded by 11% of needs in Dnipropetrovsk, Donetsk regions, 10% - in Kharkiv region, 8% - in Lviv region, less than 5% - all other 23 Ukraine regions. **CONCLUSIONS:** The results showed that in the State Formylary 2009-2012 the number of medicines for children was decreased by 22%. The costs of treatment surfactant is high enough.It is established that the highest compensation surfactants were in the Crimea, Donetsk, Dnipropetrovsk, Lviv regions. Is grounded that is necessary the creation special Ukranian Formylary for children, which will include a larger number of children's medicines.

PIH48

## SERVICE USES AND COSTS OF CHILD AND ADOLESCENT PSYCHIATRIC PATIENTS TREATED WITH ANTIPSYCHOTICS IN TAIWAN

Chang HC[1], Mccrone P[1], Su KP[2]

[1]*King's College London, London, UK,* [2]*China Medical University, Taichung, Taiwan*

**OBJECTIVES:** With the widespread of second-generation antipsychotics (SGAs) used among children and adolescents, the treatment effectiveness has been of great interest alongside with the efficacy and safety in this population. The study was designed to assess whether SGAs are associated with reduced service uses and service costs in the real world. Factors associated with health service costs were also examined. **METHODS:** The claim data (PIMC) of 1996-2008 from the National Insurance Plan of Taiwan was used. Patients aged less than 20 with an incident use of antipsychotics and last for over 12 months during this period were included for analysis. Comparisons were made between 8 SGAs and 2 first-generation antipsychotics (FGAs). Changes in service uses and service costs (all-cause, psychiatric service, non-psychiatric service costs, and medication costs) were compared. Mann-Whitney U tests and 95% confidence interval were used to examine differences. Multivariate regressions with propensity scores adjustment were performed to explore factors associated with psychiatric service costs. **RESULTS:** A total of 343 encounters were included and results showed reduced psychiatric service uses in SGAs group, but not psychiatric services costs in the SGAs group. Antipsychotics costs were nearly 6-fold higher in the SGAs group, but the antiparkinsonian med-